

## **AA Chesapeake Parasite Is Killing Fish and Making People Ill®**

Adapted from a news report published September 7, 1997

### **Problem Summary**

On September 7, 1997, a brief report in the press described a problem of disease among fish and illness among watermen (commercial fishermen) working along the Eastern Shore of the Chesapeake Bay. The report cited the case of an experienced fisherman who after two days working on the Potomac River was ill with nausea, vomiting, and stomach cramps. Other workers reported small, itchy, red, circular skin rashes, memory loss, and respiratory tract problems. Fish, reported to have bloody sores, died by the thousands. The fisherman mentioned above said he found sores on as much as 90% of his catch. Maryland officials say that due to publicity, the loss in retail fish sales could be as high as \$20 million.

Some scientists attributed the human symptoms to contact with toxin released by a microorganism called *Pfiesteria piscicida*, which was first identified in the early 1990s, but is thought to have existed for centuries. Some researchers believe this one-celled organism normally exists in a non-toxic form and that animal waste and fertilizers from farms discharged into waterways helped the *Pfiesteria* to multiply. Concerns about the problem caused the states of Maryland and Virginia to prohibit activities such as swimming, boating, and fishing in a seven-mile stretch of the affected area. In North Carolina, where problems linked to *Pfiesteria* have recurred for years, officials planned to carry out studies similar to those in Maryland.

### **Questions**

1. Explain why you might consider this situation in the Chesapeake Bay region an important problem and give at least three general reasons why you should respond.

2. Briefly describe the initial steps of an investigation to respond to this problem. For example, develop a case definition, determine the data needed for the initial steps, and give some examples of possible sources of such data in a community.

3. Develop and specify probable hypotheses to explain the cause, source, and spread of the outbreak.

4. Develop suitable recommendations and/or interventions for controlling the problem; if recommendations already have been made, then evaluate the advantages and disadvantages of the recommendations.